

40327  
S/194/62/000/006/111/232  
D256/D308

24.1800

AUTHORS: Zalivchiy, V.N., and Perepechko, I.I.

TITLE: Interferometer for measurements of velocity of ultra-sound in liquids and gases

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 6, 1962, abstract 6-5-29 zh (V.sb. Primeneniye ul'traakust. k issled. veshchestva, no. 12, M., 1960, 132-134)

TEXT: For reliability of interf. measurements it is important to have the reflector exactly parallel to the radiator, as well as to provide frequency stabilization of the generator. A description is given of a simple and reliable interferometer, free of the deficiencies of interferometers of conventional designs. A simple micrometer with its clamp removed, is used for shifting the reflector. The reflector is rigidly attached to the rod of the micrometer, the surface of the reflector being perpendicular to the axis of the rod. An adjusting mechanism constructed on the principle of gyroscopic suspension, provides for setting the reflector parallel to the ra...  
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Interferometer for measurements ...

S/194/62/000/006/111/232  
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diator with a high degree of accuracy. A heterodyne wavemeter 528  
with a high-frequency stability is used as master oscillator. 2 fi-  
gures. [Abstractor's note: Complete translation.] *✓*

Card 2/2

72221-66 EWP(j)/EWP(k)/EWT(l)/EWT(m)/T RM  
ACC NR: AR6013715

SOURCE CODE: UR/0058/65/000/010/H074/H074

AUTHOR: Koskin, N. I.; Zalivchiy, V. N.

TITLE: Analysis of the absorption of ultrasonic waves in the binary systems ethyl acetate -- acetic acid.

SOURCE: Ref. zh. Fizika, Abs. 10Zh499

REF. SOURCE: Sb. Primeneniye ul'traakust. k issled. veshchestva. Vyp. 20. M., 1961,  
127-134

TOPIC TAGS: ultrasound absorption, absorption coefficient, acetate, acetic acid, solution property

ABSTRACT: On the basis of an analysis of the data previously obtained by the authors on the coefficient of absorption of ethyl acetate in binary systems ethyl acetate -- acetic acid, an interpolation equation is obtained relating the coefficient of absorption of a mixture of arbitrary concentration with the coefficient of absorption of the liquids making up the mixture. On the basis of an analysis of the equation, a conclusion is drawn, confirmed by experiment, that the absorption coefficients of low

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(C)

concentration mixtures divided by the square of the frequency, are independent of the frequency in all temperature intervals, provided this holds true for the liquid having the larger concentration in the mixture. Ye. Sheludyakov. [Translation of abstract]

SUB CODE: 20

*me*  
Card 2/2

USSR/ Physics - Physical chemistry

Card 1/1 Pub. 147 - 32/35

Authors : Koskin, N. I.; Zalivchin, V. N.; Zipir, A. D.

Title : Study of ultra sound absorption in ortho- and metaxylenes

Periodical : Zhur. fiz. khim. 30/1, 230-231, Jan 1956

Abstract : The absorption of ultra-sound was investigated in isomers such as ortho-and metaxylenes when the nature of the bonds between individual atom groups remains almost uniform. The investigation was made at temperatures ranging from 17°C up to temperatures close to critical. The measurements, carried out by means of a special impulse installation, were along the line of saturation at frequencies of 7.6 and 15.1 mc. The results obtained are presented in a table. Five USSR references (1948-1955). Table.

Institution : Moscow Oblast Pedagogical Inst.

Submitted : June 22, 1955

ZALICHYI, V.N.

## FILE 1 BOOK INFORMATION

80/342

Voronezhskaya konferentsiya professorei i prepodavatelyej pedagogicheskikh

Prakticheskikh i teoretičeskikh i zashchitnykh nauchnykh obozrenii, Leningrad, 1977.

Vol. 2 (application of ultrasonics in medicine, Leningrad University, 1977, 1978, 1979, 235 p. Krasa also inserted, 1,000 copies printed).

Ed. V. P. Sosulin, Professor, and S. P. Bulygina, Professor.

NOTES: This collection of articles is intended for scientists specializing in

ultrasonics, and for those interested in the application of ultrasonics in

the study of the properties of materials, and to the quality control of ma-

terials. The collection constitutes the Transactions of the All-Union Con-

ference of Professors and Teachers of Pedagogical Institutions. The articles

of ultrasonics and disease the application of ultrasonics to the study of

diseases. Card 47

## Application of ultrasonics (Cont.)

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

Transactions of [Gazanskaya] Bash. Pedagogical Institute from the Boundary

of the Institute. 1977. (Bash. Pedagog. Inst. (Bash. Pedagogical Institute)).

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics in Ultrasonic Diagnosis of Cancer Density.

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

Transactions of [Gazanskaya] Bash. Pedagogical Institute. 1978. (Bash. Pedagogical Institute). In: Application of Theory and Practice of Absorption Coefficient of Ultrasonic Waves in an Ultrasound-Acoustic and Microscopic Pulse Method.

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics and Interpretation of Speed of Sound in Gases and Liquids, obtained

on the Basis of Molecular-Kinetic Concepts.

Application of ultrasonics (Cont.)

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.). In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.).

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.).

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.).

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.).

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Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.).

Babkin, V. D. [Babkin, V. D. (Bash. Pedagogical Institute)].

In: Application of Theory and Practice of Absorption Coefficient of Ultrasonics (Babkin, V. D.).

3

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ZALIVIN, N.N.; FEFERMAN, R.G.

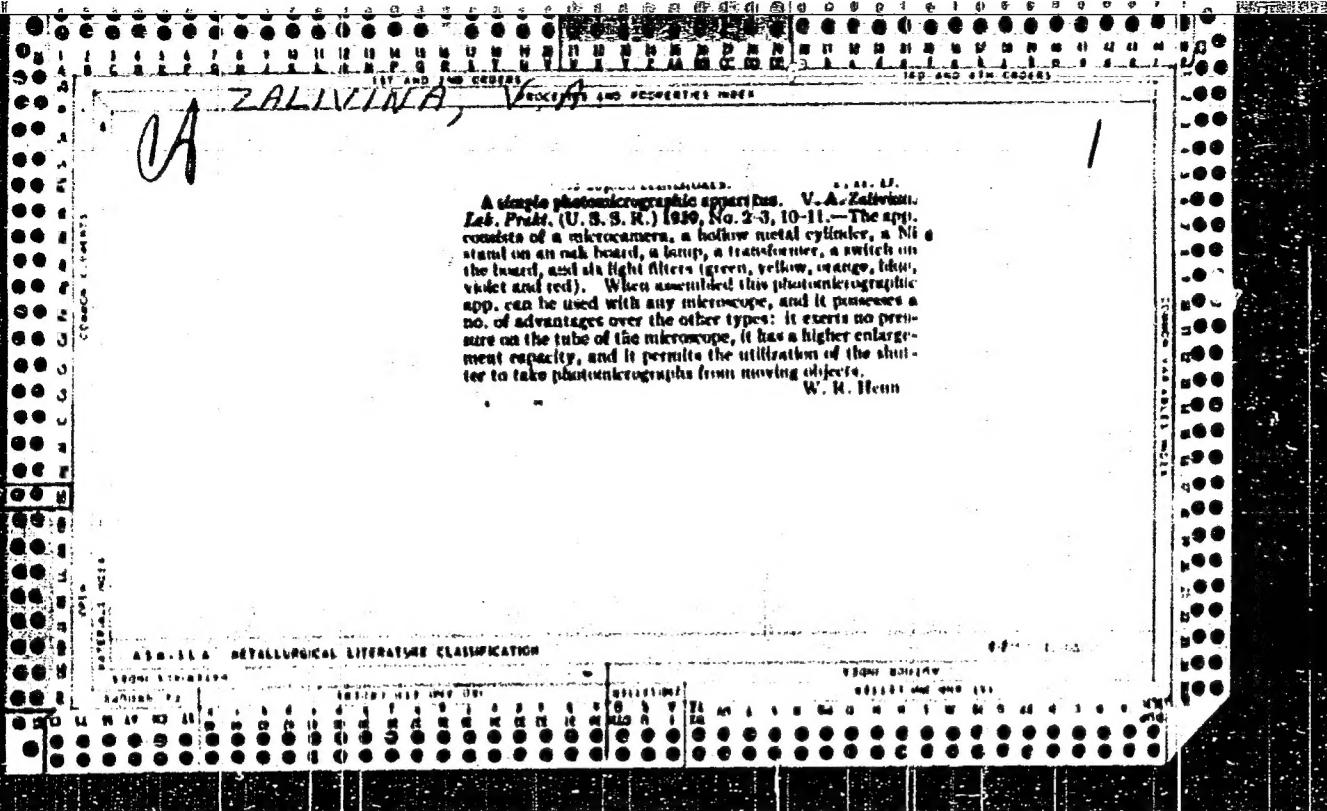
Investigating the process of cord drying with the aid of an electron  
oscillograph. Kauch. i rez. no.9:53-54 S '62. (MIRA 15:11)

1. Nauchno-issledovatel'skiy konstruktorsko-tehnologicheskiy institut  
shinnoy promyshlennosti, g. Omsk.  
(Tire fabrics--Drying)

ZALIVIN, N.N.; NITTS, Ye.F.

Contactless temperature transducer of calender rolls. Nauch.1 rez.  
21 no.8:48-49 Ag '62. (MIRA 16:5).

1. Nauchno-issledovatel'skiy konstruktorsko-tehnologicheskiy  
institut shinnoy promyshlennosti, Omsk.  
(Rubber industry—Equipment and supplies)



SOV/124-58-1-853

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 1, p 114 (USSR)

AUTHORS: Kachurin, L. G., Aleshina, G. I., Belyashova, M. A., Zalivina, V. I.,  
Kudryavtseva, V. I., Nesterova, M. I., Serebryakova, A. A.,  
Seryakova, L. P.

TITLE: Analysis of the Precipitation Zones of Stratiform Frontal Clouds  
(Analiz zon osadkov iz frontal'nykh oblakov sloistykh form)

PERIODICAL: Tr. Leningr. gidrometeorol. in-ta, 1956, Nr 5-6, pp 208-241

ABSTRACT: An investigation of the conditions of precipitation from As, Ns, and Sc type clouds of frontal origin. The first three sections are devoted to a description of the process of the conversion of cloud droplets into precipitation particles. The authors consider therein the problems of the condensational and coagulational growth of the droplets, the dissipation of cloud masses due to subsiding motions and the re-evaporation of the falling precipitation; also described are the conditions conducive to ice-crystal formation in clouds. The reasonings and graphs adduced in these sections are used further on in the analysis of the evolution of cloud masses and precipitation. The vertical motions are calculated according to the

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Analysis of the Precipitation Zones of Stratiform Frontal Clouds

method of N. I. Bureyev [Rukovodstvo po kratkosrochnym prognozam pogody (Short-range Forecasting Manual), Part I, Gidrometeoizdat, 1955] and, using a suitable graph, the authors determine the temperature level of intense ice-crystal formation for specific instances. The authors compare the location of the isotherm of intense ice-crystal formation with the location of the zone of cloud formation on vertical cross sections and arrive at the conclusion that the location of the boundaries of precipitation zones is much more accurately defined by the points of intersection between the upper boundary of a cloud formation and the line of intense ice-crystal formation than by the boundaries of the vertical currents. Utilizing the model of a specific synoptic situation the authors pose for themselves the task of clarifying the role of the ascending air currents in the process of changes in the precipitation zones. They analyze the effect of the vertical air currents on the location of the surface of intense ice-crystal formation and the altitude level of the upper cloud-mass boundary and arrive at a model of the evolution of the precipitation zones. Here they conclude that the vertical currents should be correlated not just with the fact of precipitation or nonprecipitation, but with the change in the dimensions of the precipitation zones. The last part of the paper is concerned with the confirmation of the proposed calculation scheme; it does so by means of a comparison of the actually obtaining precipitation zones

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SOV/124-58-1-853

**Analysis of the Precipitation Zones of Stratiform Frontal Clouds**

with the calculated patterns. As pointed out by the authors, an analysis of 21 instances, during 1951 and 1952, has confirmed the existence of an immediate tie between the vertical currents within the boundaries of precipitation zones and the changes of their dimensions; here the degree of agreement between the boundaries of the calculated and the actually obtaining precipitation zones is determined to a significant degree by the reliability of the calculated horizontal air-mass transfer at the level of the upper cloud-mass boundary. The Appendix contains a description of the quantitative-prediction procedure for the precipitation zones of stratiform frontal clouds. Bibliography: 15 references.

K. G. Abramovich

Card 3/3

ZALIVSKAYA, Ye. I.

TURBIN, N.V., zavednyushchii kafedroy: ZALIVSKAYA, Ye. I.

Effect of the presence of autogenous pollen in crosbreeding on the  
viability of the hybrid progeny. Uch. zap. Len.un. no.165:3-12 '53.  
(MLRA 7:7)

1. Kafedra genetiki i selektsii.  
(Fertilization of plants) (Hybridization, Vegetable)

ZALIVSKAYA, Ye. I.

"Determination of Certain Fertilization Conditions Which Influence the Fertility and Vitality of the Radish." Cand Biol Sci, Leningrad State U, Leningrad, 1954. (RZhBiol, No 8, Dec 54)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)  
SO: Sum. No. 556, 24 Jun 55

**ZALIVSKAYA, Ye. I.**

Results on studying the effect of repeated pollination on the  
visibility and inherited characteristics of radish plants.  
Vest. Len. un. 9 no.4:17-26 Ap '54. (MIRA 8:6)  
(Fertilization of plants) (Radishes)

ZALIVSKAYA, Ye.I., kandidat biologicheskikh nauk; BORMOTOV, V.Ye.

In regard to fertilization and rate of development of the  
wheat embryo under different pollination conditions. Izv.  
AN BSSR no.6: 125-130 N-D '55. (MLRA 9:6)  
(Wheat)

~~ZALIVSKAYA, Yc. I.~~  
USSR/Cultivated Plants - Grains.

M.

Abs Jour : Ref Zhur - Biol., No 4, 1958, 15538

Author : N.V. Turbin, Ye.I. Zalivsknya, A.N. Palilova, L.V. Khotyleva.

Inst : The Biological Institute of the Academy of Sciences Bielorussian SSR.

Title : The 1955 Tests on Corn Variety, Strain and Hybrid Testing.  
(Opyty 1955 g. po ispytaniyu sortov, liniy i gibridov kukuruzy).

Orig Pub : V sb.: Kukuruza v BSSR. Minsk. AN BSSR, 1957, 60-82

Abstract : The division of genetics of the Biological Institute of the Academy of Sciences, Bielorussian SSR studied in 1955 the biological and economical peculiarities of various varieties, strains, and hybries of corn and the

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ZALIVSKIY, I.L.

I.L. Zalivskiy, Georginy [Dahlias], Sel'khozgiz, 8 sheets.

Presents general information on dahlias, their botanical features and classification; methods of propagating them; hybridization and breeding new varieties; choice of plot; cultivation of soil and use of fertilizer; methods of pest control, disease control, etc.

Intended for amateur horticulturists and master workmen in greenhouse construction.

SO: U-6472, 15 Nov 1954

ZALIVSKIY, I.L.

Breeding and introduction of lilies in Leningrad. Biul.Glav.bet.sada  
no.23:14-25 '55. (MLRA 9:7)

I.Zaved imeni Voskova, Leningrad.  
(Leningrad--Lilies)

ZALIVSKIY, Ippolit Leopoldovich; BROZHNEV, Ye.Yu., redaktor; CHUNAYEVA, Z.V., tsvetnoemsky redaktor

[Dahlias] Georginy. Izd. 2-oe. Moskva, Gos. izd-vo selkhoz. lit-ry,  
1956. 141 p. (MLRA 10:1)  
(Dahlias)

ZALIVSKIY, Iuzolit. Jeogol'dovich; RODIONENKO, G.I., kandidat biologicheskikh nauk, redaktor; PETROV, N.P., redaktor; CHUMAYEVA, Z.V., tekhnicheskiy redaktor.

Rodionenko

[Decorative shrubbery] Dekorativnye kustarniki, Pod red. G.I. Rodionencko. Moskva, Gos.izd-vo sel'khoz.lit-ry, 1956. 205 p. (MLRA 10:5)  
(Shrubs)

ZALIVUKHIN, N.F.; PROSVIRIN, A.N.

Recalibrating electronic potentiometers for a smaller measurement  
range. Priborostroenie no.7:28-29 J1 '61. (MIRA 14:6)  
(Potentiometer)

ZALIWSKI, S.

Journal of the Science  
of Food and Agriculture  
Feb. 1954  
Agriculture and Horticulture

(1)  
Influence of systems of sod management on yield and development of sour cherries. S. Zaliwski (Recen. naus. Roin., 1853, 69, A, 131-140).—In grass orchards best fruit was obtained when the grass was cut three times annually and left on the surface as a mulch. When the grass was left uncut yields were poor, but were superior to those obtained when the grass was cut and removed three times a year.

A. G. POLLARD.

ZALIWSKI, ST.

Krzewy jagodowe. Wyd. 3, popr. i uzu. Warszawa, Państwowe Wydawn. Rolnicze i  
Lesne, 1953. 275 p. (Berry shrubs. 3d ed., enl. and rev.)  
DA Not in DLC

SO: Monthly List of East European Accessions (FEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

KUMARITASHVILI, M. Z.; RAZDOL'SKIY, S. M.; GAMGEBELI, V. K.; ZALIYEVA, A. Z.

Multilayer nonwoven fabrics. Izv. vys. ucheb. zav.; tekhn. tekst.  
(MIRA 15:10)  
prem. no.4:73-75 '62.

1. Nauchno-issledovatel'skiy institut tekstil'noy promysh-  
lennosti Gruzinskoy SSR.

(Nonwoven fabrics)

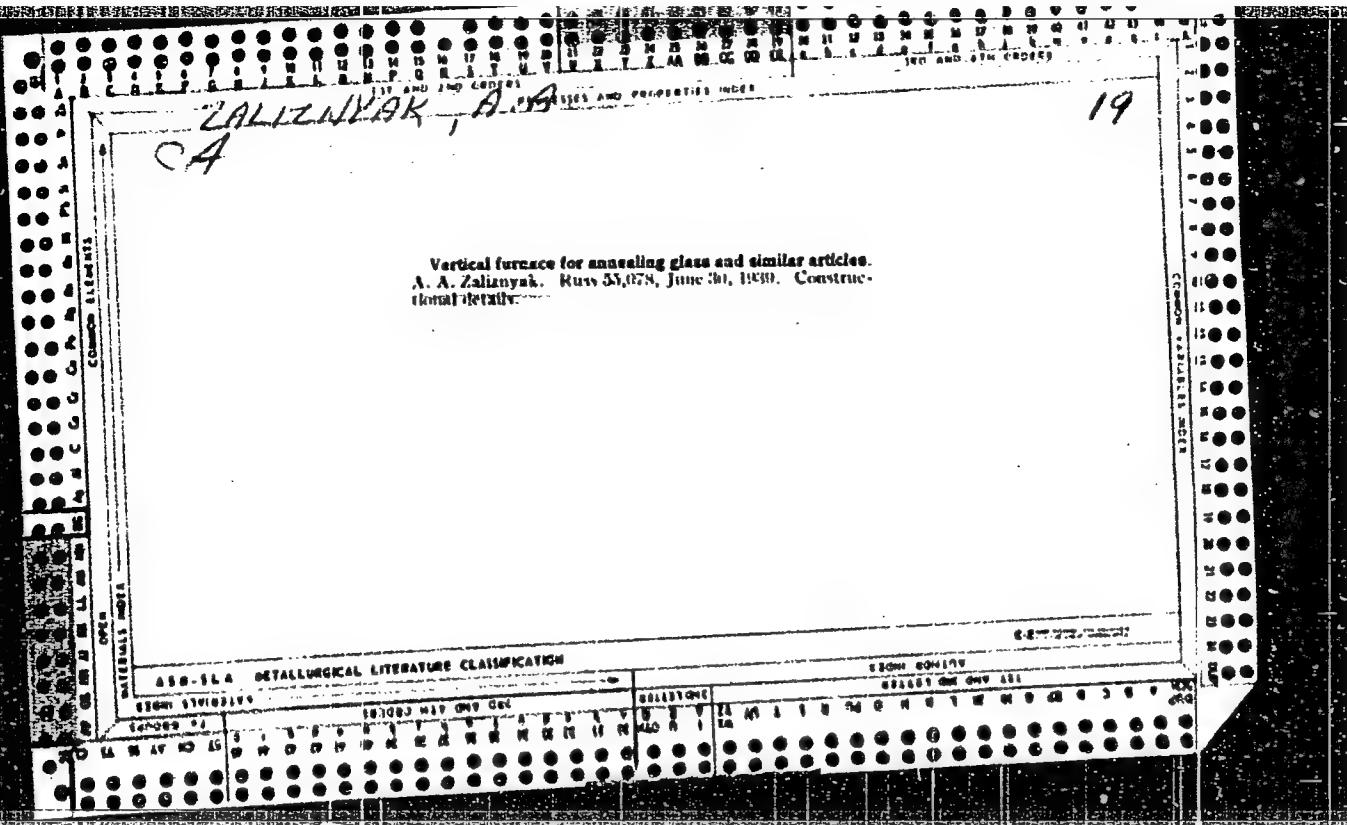
ZALIYEVА, N:V  
ZALIEVA N. V.

22523

Zalieva, N. V. K. Metodika Opredeleniya Leckorastvorimoi Fosfornoj  
Kisloty V Krasnozemnykh Pochvakh. Trudy Gruz S-Kh In-Ta Im Beriya  
TXXX, 1949 S 239-53 — Bibliogr: 5 Nazv

SO:

Letopis' No. 30, 1949



ZALIZNYAK, A. A.

Zaliznyak, A. A. - "Investigation of the Regeneration of Borate Vapors in Glass Furnaces in order to Perfect the Technology of Melting Borosilicate Glass." Min Construction Materials Industry USSR. Technical Administration. All-Union Sci Res Inst of Glass. Moscow, 1956 (Dissertation for the Degree of Candidate in Technical Sciences).

So: Knizhnaya Letopis', No. 10, 1956, pp 116-127

ZALIZNYAK, A. A.

72-1-6/13

AUTHOR: Zaliznyak, A. A.

TITLE: The Destruction Mechanism of Glass Melting-Furnace-Brickwork by Volatile Components of Boron Silicate Glass (Mekhanizm razrusheniya kladki steklovarennnykh pechey letuchimi komponentami borosilikatnogo stekla)

PERIODICAL: Steklo i Keramika, 1958, Nr 1, pp. 19 - 21 (USSR)

ABSTRACT: The destruction of furnace brickwork takes place as a result of interaction with the aggressive components of furnace gases, among which the vapors of alkaline borates are the most dangerous. They are formed during the melting of glass which contains boron anhydride and alkaline oxides. The borates of alkaline metals are distinguished by their high degree of volatility, and therefore the concentration of their vapors in furnace gases may attain a considerable amount. In the figures 1 - 4 photographs of various parts of dinas brickwork of a continuous glass-melting furnace with 20 %  $B_2O_3$  and 8 % alkaline oxides are shown. The furnace was shut down after a 10 months' campaign in order to be repaired. Melting temperature amounted to  $1420 - 1440^\circ$  and the specific output of glass mass amounted to an average of  $250 \text{ kg/m}^2$  per day. The smelting furnace worked with 30 % smelting charge and 70 % crack-up. The

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The Destruction Mechanism of Glass Melting-Furnace-Brickwork by Volatile Components of Boron Silicate Glass

average oxide content of the smelting charge as well as the losses caused by volatilization of the borates are shown in a table. The concentration of vapors of alkaline borate in the furnace gases attained 1,1 - 1,2 gr/m<sup>3</sup>. The composition of the borate vapors was as follows: 48,5 % - B<sub>2</sub>O<sub>3</sub>, 9,2 - Na<sub>2</sub>O, 42,3 % - K<sub>2</sub>O. The character of the destruction of the furnace brickwork made it possible to determine their nature and causes. The state of the bricks showed that the aggressive components of furnace gases are completely, without danger for refractories at high temperatures. However, they become exceedingly dangerous in the zone of low temperatures. This may be explained by the fact that the vapors of alkaline borates cannot dissolve refractory materials, but that they can do so to a considerable extent in the liquid state, especially dinas. The exchange of dinas in the arched roofs and walls of furnaces against high-aluminous stones with mullite content showed good results. Untight seams of furnace walls must be considered to be the main cause of the destruction of furnace brickwork. Means and ways were suggested for the purpose of remedying this fault, among others by the use of shaped bricks (which was also suggested by L. G. Gol'denberg and others). There are 4 figures, and 1 table.

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The Destruction Mechanism of Glass Melting-Furnace-Brickwork by Volatile Components of Boron Silicate Glass

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Card 3/3

VEYNBERG, Kal'man Lipmanovich; GURFINKEL', Isaak Yevgen'yovich[deceased];  
KOTLYAR, Abram Yevseyevich; NOL'KEN, Maksimilian Petrovich;  
ORLOV, Anatoliy Nikolayevich; KHERSONSKIY, Sergey Serebrenich;  
SHKOL'NIKOV, Yakov Abramovich; BROMLEY, P.V., retsenzent;  
ZALIZNYAK, A.A., retsenzent; KISELEV, N.V., retsenzent; KLEGG,  
D.I., retsenzent; SHVAGIREV, Ya.D., retsenzent; DUKHOVNYY, F.N.,  
red.; TRISHINA, L.A., tekhn. red.

[Equipment and mechanization of glass factories]Oberudovanie i  
mekhanizatsiya stekol'nykh zavodov. [By] K.L.Veinberg i dr. Mo-  
skva, Rostekhizdat, 1962. 451 p. diagrs. (MIRA 15:10)  
(Glass—Equipment and supplies)

ZALIZNYAK, A.A.; KLEGG, D.I.

Some causes of nonuniformity in melted glass. Stek.i ker. 19  
no.5:14-16 My '62. (MIRA 15:5)  
(Glass manufacture)

DUBROVINA, N.V.; ZALIZNYAK, A.A.; KLEGG, D.I.

Petroleum residue as a secondary fuel for glass furnaces. Stek.1 ker.  
18 no.5:7-8 My '61. (MIRA 14:5)  
(Petroleum as fuel) (Glass furnaces)

ZALIZNYAK, A.A., kand. tekhn. nauk; TSUKANOV, A.A., inzh.; VINOKUROV, Ye.A.,  
inzh.

Bubbling of an NC-1 composition glass batch. Stek. i ker. 22 no.8:  
8-10 Ag '65. (MIRA 18:9)

1. Gusevskoy filial Gosudarstvennogo nauchno-issledovatel'skogo  
instituta stekla (for Zaliznyak) 2. Tuymazinskiy zavod meditsin-  
skogo stekla (for TSukanov, Vinokurov).

ZALIZNYAK, D.V. FINER, N.Ya.

"Automatization of Technological Processes in Gasification of Fuel  
and Glass Melting" USSR Steklo i Keramika No 2, M Aug 1951 pp. 5-8

*Attn:*

*BCS*

852. Experience in drawing glass from a free surface.—D. V. ZALIZNEA, M. Ya FUSE,  
B. P. KERZNER and T. I. KUDRINA (Sovt. Krem., 6, No. 9, 3, 1951). Expts. with various  
types of difficulties and screens for the free drawing of glass are briefly described. (3  
figs., 1 table.)

ZALIENYAK-DV

Vertical drawing of glass pipes without debits. I. B. *MT*  
SHAPIRO, G. V. POUTSAYA, I. M. BRUE, D. V. ZALIENYAK, AND  
N. P. MEL'NIK. *Steklo i Keram.*, 12 (4) 48 (1955).—Details of  
technology and the characteristics of 4 and 6 in. pipes are  
B.Z.K.

(4)

ZALIZNYAK, D.V.

Extending the operating period between repairs of glass  
furnaces. Stek.i ker. 12 no.5:20-23 My '55. (MLRA 8:8)  
(Glass manufacture)

*Zaliznyak, D. V.*

AUTHORS: Zakharikov, N. A., Pioro, L. S., Demidovich, 72-58-3-2/15  
B. K., Zaliznyak, D. V.

TITLE: The Annealing of Glass Tubes (Otzhig steklyannykh trub)

PERIODICAL: Steklo i Keramika, 1958, Nr 3, pp. 5-8 (USSR)

ABSTRACT: It was experimentally proved that with drawing of tubes of 50 mm diameter from ordinary glass (of the type of window-glass) at a speed of 70 to 75 m per hour, the residual stresses amount to 20 to 50  $\mu\text{p/cm}$  per 1 mm of the tube-wall thickness after cooling in the engine shaft. With drawing

APPROVED FOR RELEASE: 09/19/2001 class CIA-RDP86-00513R001963710006-8  
90 to 95 m per hour, the residual stresses attain 30 to 70  $\mu\text{p/cm}$  per 1 mm thickness of the tube-wall. The velocity of drawing of tubes of 50 mm diameter amounts to 90 to 100 of running meters per hour. The output of the engine could be increased if it would be possible to achieve the first annealing of the tubes in the engine-shaft and to carry out the subsequent annealing in special plants. The subsequent annealing is at present carried out in a furnace the capacity of which is smaller than that of the engines, so

The Annealing of Glass Tubes

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that part of the current tube-production remains unannealed on stock in the glassworks at Gomel. Tests were carried out with a gas annealing furnace which was developed with the assistance of G. F. Martynyuk and I. A. Shilov and which operated according to a principle which is different from the existing one. In this furnace, the glass-tubes are simultaneously heated both from inside and outside by means of blowing by combustion gases, by which the efficiency of the annealing-process increases, as well as the quality of the tubes, due to a more uniform heating. A formula with a coefficient K which depends on the diameter and on the lengths of the tubes, as well as on the velocity of combustion gases is given for the computation of temperature, as may be seen from figure 1. This furnace is represented in figure 1 and is designed for the operation of 2 mechanical equipments. Further, the construction and the operation of the furnace are fully described. The glass-tubes are vertically located in a container and conveyed into the chambers of the furnace by means of trucks. The furnace has 4 chambers and the annealing scheme is divided into 4 equal periods. This furnace has been in operation for a period of 11 months during which 72 kilometers of tubes were annealed.

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The Annealing of Glass Tubes

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The measured values of the residual stresses are given in table 2. The temperatures of the combustion gases at the input and output of the sets of tubes are given in figure 2. There are 2 figures and 2 tables.

ASSOCIATION: Institut ispol'zovaniya gaza AN USSR  
(Institute for Gas-Utilization AS Ukrainian SSR)  
Gomel'skiy stekol'nyy zavod (Gomel' Glassworks)

1. Glass tubing--Heat treatment

Card 3/3

AUTHORS:

Korobko, M. I., Zaliznyak, D. V., Firer, M. Ya., 72-58-3-5/15  
Statseko, A. V., Khrizman, S. S.

TITLE:

Automatic Pressure-Regulation in Glass-Melting Furnaces  
(Avtomlicheskoye regulirovaniye davleniya v steklovarennnykh  
pechakh)

PERIODICAL:

Steklo i Keramika, 1958, Nr 3, pp. 17-22 (USSR)

ABSTRACT:

The major part of the continuous glass-melting furnaces has a regulation of pressure which is carried out by an electro-hydraulic system. Tests with this were carried out in 1952 by V.G. Gutop and V. M. Obukhov in the Gusevskiy glassworks imeni Dzerzhinskiy (reference 2). Their insufficient reliability and complication was proved in practice. This induced some members of the personnel, amongst whom there was also V. M. Obukhov, to propose other systems of pressure - regulation. A series of systems is compared with each other in this work. The regime of chamber pressure has a great influence on the technology and thermodynamics of glass - melting, since it produces the gaseous atmosphere required above the metal. Special importance is attributed to the

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## Automatic Pressure-Regulation in Glass-Melting Furnaces

72-58-3-5/15

gaseous and hydraulic regime during the operation with a layer of soda-sulfate, as it was proved in the practice of the Gomel' glassworks. The composition of the exhaust gases of system number 1 of the glass-works at Gomel, is shown in table 1. With respect to the problem of pressure-regulation, the authors refer to the works by M. I. Korobko (reference 1), V. G. Gutop and B. M. Usvitskiy (references 1 and 2). An electro-hydraulic system of pressure-regulation is shown in figure 1. Further, the deficiencies of the hydraulic systems are fully described and the advantages of an electric system, as well as of the rotary slide valves, are pointed out. Data on both equipment and cost of various systems of regulation are given in the table 2. The following component parts of this system are given: an electric manometer DMR, regulator RDM - 3, recording mechanism TNSK, magneto-starter MPKRO -210, executive mechanism IMT 25/120, electron regulator EPR, and others. 3 systems of regulation are represented in figures 3, 4 and 5 and a diagram of the recording device is shown in figure 6. The automatic pressure regulation in the furnace, based on the measurement at one point, is qualified as insufficient. The use of the regulator EPR of the Institute for Gas-Utilization AN Ukrainian SSR

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Automatic Pressure-Regulation in Glass-Melting Furnaces

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which regulates all sections of the furnace (figure 7) and which was experimentally used in the Gomel glassworks, is recommended. There are 7 figures, 2 tables, and 7 references, 7 of which are Soviet.

1. Glass--Production

Card 3/3

PIORO, L.S.; ZALIZNYAK, D.V.; MAYEVSKIY, Ye.R.

Heat exchanger with movable head. Trudy Inst. isp. gaza AN URSR  
no.5:77-87 '58. (MIRA 11:12)  
(Heat exchangers)

ZALIZNYAK, D. V.

AUTHORS: Konovalov, V. V., Chechetkin, V. I., SOV/72-58-7-5/19  
Zaliznyak, D. V., Firer, M. Ya.

TITLE: Semi-Industrial Investigations of the Thermal Preparation of  
Glass Layers (Polupromyshlennyye issledovaniya termicheskoy  
podgotovki stekol'nykh shikht)

PERIODICAL: Steklo i keramika, 1958, Nr 7, pp. 17 - 24 (USSR)

ABSTRACT: Such a sintering device is shown in figures 1 and 2 and is  
described afterwards. The tests were carried out with two types  
of layers: the test-and the working layer, the compositions of  
which are given in table 1. The curves of the rise in temperature  
during the sintering of the two layers under the same conditions,  
are given in figure 3. The curves of the dependence of the  
 $Na_2SO_4$ -content in finished agglomerates on the relation of gas  
and air in the induction mixture for 2 sulfate-soda layers are  
given in figure 4, and are described in full details. The tem-  
perature curves obtained with the sintering of the test layer  
are given in figure 5. Further the authors report on the filling  
weight of the agglomerated glass layers, as well as also on the  
productiveness of the agglomerates. The most advantageous height

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Semi-Industrial Investigations of the Thermal Preparation of Glass Layers SCV/72-58-7-5/19

of layer during sintering, as well as the optimum velocities of this process are given in table 2. The duration of the heat treatment, as well as the curves of vacuum-changes for different types of layers and heights are given (Figures 6,7 and 8). The heat-treatment lasts 9 to 10 minutes. Then, the consumption of loosening- and foundation material, as well as the gas consumption for the heat treatment of the layer are given. The dependence of the specific gas consumption on the excessive air supply for various layers is shown (Fig 9). The recommended gas processes for some glass-layers are given in table 3. The dependence of the gas consumption on the duration of the heat treatment and the sintering speed are illustrated by means of curves (Figs 10 and 11). Such a device has been developed for a tank furnace of the Gomel' Glass-Works on the basis of the semi-industrial tests carried out. A test series of the glass melting of heat-treated layers was carried out by which the technical and economic efficiency of their industrial use was proved. There are 11 figures, 3 tables, and 2 Soviet references.

Card 2/3

15(6)  
AUTHOR: Zaliznyak, D. V. SOV/72-59-2-2/21

TITLE: The Gomel' Factory - Leading Enterprise in the Glass Industry of Belorussia (Gomel'skiy zavod - vedushcheye predpriyatiye stekol'noy promyshlennosti Belorussii)

PERIODICAL: Steklo i keramika, 1959, Nr 2, pp 4-7 (USSR)

ABSTRACT: The Gomel' factory was established on November 7, 1933 as Belorussia's first mechanized glass works to produce sheet glass. The author describes the factory's gradual development and recalls the names of those who achieved merit working for it. In World War II the factory was heavily damaged, but by 1947 it again attained its 1940 production level. A number of improvements was introduced in Production in the years between 1947 and 1950. Thanks to the active co-operation of its personnel more than 1,000 inventions and rationalization suggestions were made, that led to a saving of 9,500,000 roubles as well as to a great increase of production within the factory. Names and pictures of the most outstanding workers are supplied. This factory has been the first in the USSR to run an experimental shop for the production of heat resistant glass pipes (see Figure). The workers' collective

Card 1/2

The Gomel' Factory - Leading Enterprise in the Glass Industry of Belorussia SOV/72-59-2-2/21

won the red challenge banner of the Ministers' Council of the Belorussian SSR as well as that of the Belorusskiy respublikanskiy Soviet profsoyuzov (Belorussian Republican Council of Workers' Unions) in both the first and the second quarter of 1958. As compared to the 1957 level, the factory's gross production is to be considerably increased by 1965. A few pictures are shown of various factory departments. There are 11 figures.

Card 2/2

15(2)  
AUTHORS:

Zaliznyak, D. N., Firer, M. Ya., Konovalov, V. V., Chechetkin,  
V. I., Dunayev, V. G.

SOV/72-59-10-6/14

TITLE: The Influence of Thermal Preparation of the Charge on Glass  
Frits

PERIODICAL: Steklo i keramika, 1959, Nr 10, pp 21 - 27 (USSR)

ABSTRACT: In the years 1952-1954, the Moskovskiy gornyy institut (Moscow  
Mining Institute) together with the Gomel' Glassworks carried  
out investigations of the thermal preparation of glass charges  
(Footnote 1). Experiments on the melting of the sintered charge  
in continuous glass-melting furnaces were carried out at the  
Gomel' Glassworks, and experiments of comparative melting con-  
cerning the initial and the sintered charge were carried out at the  
laboratory of the first Kafedra silikatov i stekla Belo-  
russkogo politekhnicheskogo instituta (Chair for Silicates  
and Glass of the Belorussian Polytechnic Institute), at the La-  
boratory for Glass Melting, as well as at the test plant of the  
institut stekla (Glass Institute) (Footnote 2). It was estab-  
lished that the melting time of the sintered charge depends on  
its content of free  $Na_2SO_4$  (Fig 1), as well as on the temper-

Card 1/3

The Influence of Thermal Preparation of the Charge on SOV/72-59-10-6/14  
Glass Frits

ature of the sintered charge (Fig 2). It may be seen from figures 3,4,5, and 6 that vitrification is considerably accelerated during the melting of the sintered charge. The melting time of the initial and the sintered charges is shown in table 1. As may be seen from figure 7, the maximum furnace temperature was 1350°. The chemical analyses of the glasses from the sintered and initial charge are shown in table 2. Experiments showed that at furnace temperatures of from 1350 to 1450°, the entire melting and the refining of glasses from the sintered charge afford better results as compared with the initial charge. Moreover, at equal charge weight, 20% more glass is obtained from the sintered charges than from the initial charge. The chemical analyses of two experimental batches of sintered charges are shown in table 3. By using a cold sintered charge, the furnace output can be increased by 25-30%, and by using a hot charge (at 800-900°), it can be increased by 35-40%, and the time of vitrification and refining can also be considerably reduced. According to indications of Professor N. V. Solomin (Footnote 3), the furnace campaign can be considerably lengthened by using a sintered charge. According:

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The Influence of Thermal Preparation of the Charge on Glass Frits SOV/72-59-10-6/14

to indications of Professor M. G. Stepanenko (Footnote 4), the efficiency of such a glass-melting plant can also be considerably increased. Conclusions: As shown by the experiments, the thermal preparation of glass charges is of great interest for the glass industry. To utilize all the advantages of this process, its economic viewpoint should also be considered. There are 7 figures, 3 tables, and 5 references, 3 of which are Soviet.

Card 3/3

ZALIZNYAK, D.V.; GALDINA, N.M.; MAYEVSKIY, Ye.R.; MEL'NIK;  
FIREN, N.Ya.; SHCHEKOTIKHINA, N.M.

Studying the performance of various refractories in the  
glass tank furnaces of the Gomel' glass factory. Stek.i  
kor. 19 no.9:4-7 9 '62. (MIRA 15:9)

(Glass furnaces)  
(Refractory materials--Testing)

GALDINA, N.M.; SHATOVA, N.P.; ZALIZNYAK, D.V.; MEL'NIK, Ye.P.; FIRER, M.Ya.

Service life of Bakor 33 and Korkhart Tsak refractories in  
glass furnaces. Ogneupory 30 no.4:20-24 '65. (MIRA 18:6)

1. Gosudarstvennyy institut stekla (for Galdina, Shatova).
2. Gomel'skiy stekol'nyy zavod (for Zaliznyak, Mel'nik, Firer).

KALITENKO, O.V. [Kalytenko, H.V.]; ZALIZNYAK, TS.M.

Decoration of porcelain ware with cobalt sub-glaze paint. Leh.  
prom. no.2363-66 Ap-Je'64 (MIRA 17e?)

ZALKA, A.

"Modern Flight and Its Problems." p. 709 (TERMESZET ES TARSADALOM.  
Vol. 113, No. 12, Dec. 1954; Budapest, Hungary.)

So: Monthly List of East European Accessions, (EEAL), LC, Vol. 4,  
No. 4, April 1955, Uncl..

ZALKA O. and HOLLOSI K. Inst. fur path. Anat., Lorand Eotvos-Univ., Budapest.  
Teilungsverhältnisse der linken Arteria coronaria cordis, mit Rücksicht auf die  
Verschlüsse der Kranzader. Nodes of ramification of the left coronary artery in  
relation with coronary obstruction ACTA MEDICALE. (Budapest) 1951, 1/1 (133-136)

Illus. 6

In 119 adults the branches of the left coronary artery were dissected. In 12 cases  
the ramification agreed with the standard pictures. In 36 cases the ramus circum-  
flexus gave off a large branch running between the ramus interventricularis ventra-  
lis and the left margin of the heart, parallel with the latter. In 58 cases the left  
coronary artery divided into 3 branches; the ramus circumflexus, the ramus interven-  
tricularis anterior and a ramus obliquus running obliquely on the ventral surface of  
the left ventricle. In 6 cases the latter artery was replaced by a number of smaller  
branches arising from a somewhat dilated part of the artery. In 5 cases only the ra-  
mus interventricularis anterior and the ramus obliquus were present. In 2 cases, in  
additions to the large anterior interventricular ramus, only a very small ramus cir-  
cumflexus was present. It is expected that the pattern of ramification affects the  
site of predilection of coronary thrombosis.

Mijnsberg - Utrecht (I, 5, 6)

SO: EXCERPTA MEDICA, Vol. 8, No. 4, Section VI, April 1954

L 00/81-67 EFT(1)/EWT(1) LJP(c) GW  
ACC NR: AP6026754

SOURCE CODE: UR/0197/66/000/007/0034/0038

AUTHOR: Shteyns, K. A. --Steins, K.; Zal'kalne, I. E. --Zalkalne, I.;  
Kaulinya, Z. P. --Kaulina, Z.14-2  
BORG: Astronomical Observatory, LGU im. P. Stuchko (Astronomicheskay  
observatoriya LGU)TITLE: Chart for modeling the star movement in the environs of the sun

SOURCE: AN LatSSR, Izvestiya, no. 7, 1966, 34-38

TOPIC TAGS: star chart, conditional star, vector, relative velocity, astronomic  
time, parameter, Monte Carlo method, star movementABSTRACT: A system has been designed to simulate star movement. The stars  
are uniformly distributed over the surface of a sphere and move at equal time  
intervals and at equal rates inward into the sphere. The vectors of relative  
velocities are uniformly distributed in all directions. It is shown that the basic  
properties of the chart have already been obtained by the Monte-Carlo method for  
250 conditional stars. Formulas are evolved for the intensity and density of the

Card 1/2

L 00781-67

ACC NR: AP6026754

stream of stars; they are in good agreement with calculations by the Monte-Carlo method for the proposed chart. The parameters of the chart were determined in accordance with the catalog of stars nearest to the Sun. Orig. art. has: 1 figure, 5 formulas, and 1 table. [Based on authors' abstract] *(C)*  
[NT]

SUB CODE: 03/ SUBM DATE: 10Jan66/ ORIG REF: 001/ OTH REF: 003/

Card 2/2 mjs

ZALKAN, P. M., Prof.

Zaveduyushchiy kafedry kozhnykh i venericheskikh bolezney Yaroslavskogo meditsinskogo instituta

Vest. ven, i derm., 1952, no. 4, iyul'-avgust

AKOPYAN, A.T., BAHMAREVICH, Ye.M., AVAKYAN, A.A., OVCHINNIKOV, N.M.,  
ZALKAN, P.M., IYEVLEVA, YE.A., IVANOVA, N.K., ZERTSALOVA, G.I.

Experimental data on the study of causative agent of pemphigus in  
the developing chick embryo [with summary in English]. Vest.derm.  
1 ven. 32 no.4:3-9 Jl-Ag '58 (MIRA 11:10)

1. Iz tsentral'nogo kozhno-venereologicheskogo instituta  
dir N.M. Turanov) i Instituta virusologii Akademii meditsinskikh  
nauk SSSR (dir. P.M. Kosyakov).  
(PEMPHIGUS, virus,  
culture in chick embryo (Rus))

ZALKAN, P.M., prof.

"Problems in dermatology and venereology," vol.4. Reviewed by  
P.M. Zalkan. Vest,derm. i ven 32 no.5:76-77 S-0 '58 (MIRA 11:11)  
(SKIN--DISEASES)  
(VENERICAL DISEASES)

ZAL'KIAD, YU. S., PROF

PK 5/49T14

USSR/Chemistry - Analysis  
Chemistry - Chromatography

May 48

"New Developments in the Field of Chromatographic  
Analysis," Prof Yu. S. Zal'kiad, 1 p

"Priroda" No 5

Main disadvantage of chromatographic method is  
large volume of absorbent required. Hence its use  
in industry is restricted to cases where expensive  
substances are manufactured in comparatively small  
quantities, e.g., penicillin. Difficulty is over-  
come by described new appliance, called a chromato-  
fuge.

5/49T14

ZEVIN, L.S.; ZALKIN, A.I.

Method of absorption spectra of calcium hydrosilicates in the infrared.  
Trudy NIIAbestsementa no.10:45-53 '59. (MIRA 16:8)  
(Calcium silicates--Absorption spectra)

OVCHINNIKOV, N.M.; AKOPYAN, A.T.; SMELOV, N.S.; RAKHMALEVICH, E.M.;  
BELYAYEVA, E.F.; ZERTSALOVA, G.N.; ZALKIN, N.M.; REZNIKOVA, L.S.;  
AVAKYAN, A.A.

Data on the etiology of pemphigus. Borgyogy. vener. szemle 36 no.5:  
193-200 S '60.

1. Az Orosz Szocialista Szovjetseg Koztarsasag Egeszsegugyi  
Miniszteriuma Kozponti Bor-Nemikortani Intezetenek (Igazgato:  
Turanov N.M., az orvostudomanyok kandidatusa es a Poliomyelitis-  
kutato Intezet (Igazgato: prof. Caumakov M.I., a Szovjet  
Tudomanyos Akademia levelezo tagja) kozlemenye.  
(PEMPHIGUS etiol)

ZALKIN, S. L.

TYULZNEV, V.G.; ZALKIN, S.L., redaktor.

[Light mechanization in drilling] Malaia mekhanizatsiya v burenii.  
Moskva, Gos. nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry,  
1950. 57 p.  
(Boring machinery)

(MLRA 7:6)

ZAIKIN, S

1

Mekhanizatsiya i organizatsiya rabot po spusku i pod'yemu burovogo instrumenta (Mechanization and organization of operations in lowering and hoisting of drilling tools) Moskva, Gostoptekhizdat, 1951. 132 p. diagrs., tables. Contains bibliography. Cataloged from abstract. Analysis of productional drilling cycle and classification of labor operations revealing their capacity, characteristics and significance for the increase of drilling speed. Stresses time consumption and physical effort of workers for the fulfillment of basic working operations during lowering and hoisting of drilling devices.

N/5  
741.3  
.Z2

ZALKIN, S. L.

Mekh nizatsiya trudoyemkikh i tyazhelykh rabot pri podzemnom remonte skvazhin  
(Mechanization of labor-consuming and heavy work in underground repair of wells, by)  
M. L. Langleben, S. L. Zalkin. Moskva, Gostoptekhizdat, 1952.  
174 p. illus., diagrs., tables.  
"Literatura": p. 173

SO: N/5  
664.4  
.L2

N/5  
741.3  
.221

ZALKIN, S. I.

Mechanisierung und Organisation der Arbeiten beim Einlassen und Ausbauen  
des Bohrgestanges. Leipzig, Fachbuchverlag, 1954.  
130 p. diagrs., tables.

Translation from the Russian: "Mekhanizatsiya i organizatsiya rabot po  
spusku i pod'yemu burovogo instrumenta", Moscow, 1951.  
"Literatur": p. 130.

ZALKIN, S. L.

ZALKIN, S. L.; TAGIYEV, E. I.; GEL'FGAT, Ya. A., redaktor; REZNIK, A. A.,  
redaktor; TITSKAYA, B. F., redaktor; POLOSIKA, A. S., tekhnicheskiy  
redaktor.

[Double shaft drilling method for petroleum and gas well] Dvukh-  
stvol'noe burenie neftianykh i gazonovykh skvazhin. Moskva, Gos.  
nauchno-tekhn. izd-vo neftianoi i gorno-toplivnoi lit-ry, 1954.  
(MLR 7:7)  
181 p.

(Petroleum--Well-boring) (Gas, Natural)

ZALKIN, S. L.

"Investigation of the Combined Processes of Lowering and Pulling of Tools During Twin-Well Drilling." Cand Tech Sci, Moscow Order of Labor Red Banner Petroleum Inst imeni Academician L. M. Gubkin, Min of Higher Education USSR, Moscow, 1955. (KL, № 8, Feb 55)

SO: Sum. №. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

15-57-5-7029

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 5,  
p 184 (USSR)

AUTHORS: Zalkin, S. L., Agayev, S. I., Alifanov, I. N.

TITLE: Triple-Hole Oil Well Drilling (Trekhstvol'noye  
bureniye neftyanykh skvazhin)

PERIODICAL: Novosti neft. tekhn. Neftepromysl. delo, 1955, Nr 7,  
pp 2-8

ABSTRACT: A group of three wells may be drilled simultaneously  
by one drilling crew with one drill rig. Standard  
equipment includes the UZ-4-3 winch, three U8-3 pumps,  
the MAP-138-8 and FAMSO (380 kw) electric motors, and  
two sets of 5-inch drill pipes. Special equipment  
includes the VMB-150 derrick, the UMB-3 sliding crown  
block with the control panel at the driller's post,  
three RMB-560 rotors, two MU-2 control gears, and the  
DMP-1 and ZMP-2 feeding mechanisms. The triple-hole

Card 1/2

'Triple-Hole Oil Well Drilling (Cont.)

15-57-5-7029

method permits combining three basic operating processes: 1) automatic drilling without a compound pulley system in one well; 2) the raising of the second group of drill pipes from the second well; 3) the lowering of these pipes into the third well. Working tests have shown that triple-hole drilling increases production of the drill crew and reduces the volume of preliminary operations. It thus reduces the cost of well drilling.  
Card 2/2

M. G. M.

15-57-4-5658  
Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 4,  
p 220 (USSR)

AUTHOR: Zalkin, S. L.

TITLE: Equipment of Paired Oil Wells (Oborudovaniye  
ekspluatatsionnykh skvazhin, proburennnykh dvustvol'nym  
metodom)

PERIODICAL: Novosti neft. tekhn. Neftepromysl. delo, 1956, Nr 6,  
pp 28-30

ABSTRACT: Development and maintenance of paired oil wells are  
complicated by the distance of approximately 1.5 to  
1.8 m between the collars. The author proposes the  
use of pumps without equalizers in deep-pumping  
development of such wells. Pumps of this nature may  
serve two wells and insure a relatively free space  
around the openings for underground and major repairs.  
The Azinmash (Azerbaijan Scientific Research

Card 1/2

Equipment of Paired Oil Wells (Cont.)

15-57-4-5658

Institute of Oil Machinery) has developed the VET28 x 75-2 metal derrick for paired wells. This derrick permits repair of either well. The time loss for preparatory operations with this derrick does not exceed the normal.  
Card 2/2

M. G. M.

ZALKIN, S.L.; TOMASHPOL'SKIY, L.M.

Economic effectiveness of two-column group drilling. Neft.khoz.33  
[i.e.34] no.9:8-15 S '56. (MIRA 9:10)  
(Oil well drilling)

ZALKIN, S.L.; TOMASHPOL'SKIY, L.M.; TIMOFEEV, N.S., redaktor; DUBROVINA,  
[REDACTED], vedushchiy redaktor; MUKHINA, E.A., tekhnicheskiy redaktor

[Two-column group drilling of wells; a textbook for the lecturer]  
Dvukhatvol'noe kustovoe burenie skvazhin; v pomoshchi' lektoru. Pod  
red. N.S.Timofeeva. Moskva, Gos.nauchno-tekhn.izd-vo neft. i gorno-  
toplivnoi lit-ry, 1957. 86 p. (MLRA 10:10)  
(Oil well drilling)

ZAIKIN, S. L.

93-5-5/19

AUTHOR: Gusman, M. T., Zalkin, S. L.

TITLE: The Use of Bottom Hole Forwarding Mechanisms in Deep Well Turbine Drilling (O primenenii zaboynykh mekhanizmov podachi pri turbinnom bureniyu glubokikh skvazhin)

PERIODICAL: Neftyanoye Khozyaystvo, 1957, Nr 5, pp. 16-21 (USSR)

ABSTRACT: One of the problems confronting drillers in deep and deflected well turbine drilling is the maintenance of sufficient and constant drilling pressure on the bit. For various reasons the drill pipe has a tendency to become suspended affecting thereby the penetration rate of the bit. In rotary drilling this problem was solved by installing a string of weighted drill pipe above the bit. In 1956, the Tatneft' Association introduced this method. In 1956, drilling with positive results. The only drawback was that so much time was lost in lifting and lowering the weighted drill pipe. The VNIIburneft' (All-Union Scientific Research Institute for Oil Drilling) devised

Card 1/4

93-5-5/19

## 'The Use of Bottom Hole Forwarding Mechanisms in Deep Well (Cont.)

another method of maintaining a constant pressure on the bit. The device known as a ZMP (zaboynny mekhanizm podachi - a forwarding face mechanism) is located above and attached to, the turbo drill itself, allowing the turbo drill and its bit to remain under constant pressure, which can be calculated using the following equation:

$$R = \frac{PF}{1000} + q_t + q_m$$

where  $P$  is the pressure drop across the turbo drill,  $F$  - the area of the piston,  $q_t$  - the weight of the turbo drill and  $q_m$  the weight of the movable part of the ZMP. It is stated that the fact that the instrument helps to maintain a constant pressure on the bit is somewhat inconsistent with the requirements of drilling, but it is more advantageous to have such a constant load than to be unable to vary the load altogether as is the case with deep well drilling. A detailed description of

Card 2/4

The Use of Bottom Hole Forwarding Mechanisms in Deep Well (Cont.) 93-5-5/19

the forwarding device and its operation is given (Fig. 1 and 2). In order to increase the load on the bit, weighted drill pipe may be installed between the ZMP and the turbodrill. An additional load can be achieved by using a two- or three- piston ZMP. The maximum load of a three-piston designed and tested by the VNIIburneft' in the Tatar Republic in 1956 was 30 t. To test the effect of the ZMP on the penetration rate and on the footage drilled per bit the VNIIburneft' conducted experimental work in two adjoining wells in the Mukhanovo area under identical geological and engineering conditions with and without the forwarding devices. The data in Fig. 3 shows the change in the penetration rate and in the footage drilled per bit both with and without the ZMP devices to be a function of the depth of the well. The ZMP devices increase the penetration rate and the footage drilled per bit, which also increase as the depth of the well increases. Production drilling made it possible to test several types of ZMP devices. The specifications of various ZMP mechanisms are given in the table. In conclusion the author states: 1) The existing methods of regulating the weight on the

Card 3/4

1. ZALKIN, S. YA.
2. USSR (600)
4. Indicators and Test Papers
7. Propagation of yeast cells as an indicator of small quantities of chemical substances.  
Usp. sovr. biol. 34, no. 3, 1952.
9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

ZALKIN, S.Ya.

"Physiological regeneration" by M.A.Vorontsova, L.D.Liozner.  
Reviewed by S.IA.Zalkin. Usp.sovr.biol.42 no.3:372-376 N-D '56.  
(REGENERATION (BIOLOGY)) (MLIA 10:1)  
(VOBONTSOVA, M.A.) (LIOZNER, L.D.)

ZALKIN, V.

Mbr., Zoological Museum, Moscow Order Lenin State Univ. im. M. V. Lomonosov,

-1945-.

"On the Taxonomic Position of *Capra falconeri* Wag. in the USSR," Dok. AN,

46, No. 5, 1945.

"*Moschus moschiferus* Turowi Subsp. Nov. from the Russian Far East," ibid.,

No. 8, 1945.

ZALKIN, V.

Improvement of the measuring circuit of the EPPV-60 automatic  
compensator. Zav. lab. 31 no.9:1151-1152 '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy i proyektno-konstruktorskiy  
institut kompleksnoy avtomatizatsii neftyanoy i gazovoy promyshlen-  
nosti.

ZALKIN, V. M.  
Metallurgy

Dissertation: "Phase Transformations in Steel on Rapid Electric Heating." Cand.  
Tech Sci, Moscow Order of Labor Red Banner Inst of Steel imeni I. V. Stalin, 18 Mar 54.  
(Vechernyaya Moskva, Moscow, 8 Mar 54)

SO: SUM 213, 20 Sep 1954

ZALKIN, V. M.  
USSR/Miscellaneous - Metallurgy

Card 1/1

Author : Zalkin, V. M.

Title : Optimum Temperatures during High Speed Electrical Tempering of Steel

Periodical : Stan. i Instr. Ed. 1, 16-17, Jan/1954

Abstract : Experiments on the selection and calculation of optimum temperatures for high speed electrical tempering of steel (Mark, 50, U8, U12, and 30KHGSA) are described. Four references; table and graphs.

Institution : \*\*\*\*\*

Submitted : \*\*\*\*\*

ZALKIN, V. M.

FD-594

USSR/Metals - Austenite conversion

Card 1/1 : Pub 153-6/22

Author : Gulayev, A. P., and Zalkin, V. M.

Title : Effect of heating speed on the position of the temperature interval of conversion of pearlite into austenite

Periodical : Zhur. tekhn. fiz. 24, 216-221, Feb 1954

Abstract : Analyze the effect of heating speed on the position of the "critical point" i.e. the point of quickest conversion of pearlite into austenite. Assume that the accuracy of the experimental determination of temperature interval depends on the inertia of the recording equipment and on the temperature scale and sensitivity of the oscillograph. Results are plotted in graphs. 9 references.

Institution :

Submitted : June 28, 1953

ZALKIN, V. M.

USSR/Metals - Steel heating

FD-595

Card 1/1 : Pub 153-7/22

Author : Gulayev, A. P. and Zalkin, V. M.

Title : Problem of analyzing the thermal curves of velocity heating of steel

Periodical : Zhur. tekhn. fiz., 24, 222-226, Feb 1954

Abstract : Because the heating speed varies at conversion points (see previous abstr.) due to emission or absorption of latent heat, these points are easily found on thermal curves. But with increasing conversion speed the heat balance varies and decalescence occurs, i.e. the temperature drop as a result of conversion. These assumptions are experimentally confirmed and plotted in graphs. No references.

Institution :

Submitted : June 28, 1953

ZALKIN, V.M.  
GULYAYEV, A.P., doktor tekhnicheskikh nauk, professor; ZALKIN, V.M.,  
kandidat tekhnicheskikh nauk.

Phase transformations in steel during high-speed electric heating.  
Metalloved. i obr.met.no.2:15-20 Ag '55. (MLRA 10:1)

1. Moskovskiy vecherniy mashinostroitel'nyy institut.  
(Steel--Heat treatment) (Metals at high temperature)

ZALKIN, V.M., kandidat tekhnicheskikh nauk

Heating of parts during high frequency hardening. Sel'khoz-  
mashina no. 6:27-29 Je '55. (MLRA 8:8)  
(Steel--Heat treatment)

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963710006-8

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963710006-8"

ZALKIN, V. M.

USSR/Engineering - Physical Metallurgy

FD-3229

Card 1/1      Pub. 41-10/22

Author      : Gulyayev, A. P. and Zalkin, V. M., Moscow

Title      : On the Theory of Phase Transformations in Steel During Heating

Periodical      : Izv. AN SSSR, Otd. Tekh. Nauk 7, 93-95, Jul 55

Abstract      : Considers the kinetics of the transformation of pearlite into austenite during continuous heating. U8 grade steel specimens were used. Shows influence of rate of heating ( $10^{\circ}$ ,  $60^{\circ}$ ,  $160^{\circ}$ , and  $350^{\circ}\text{C}$  per second) on the degree of transformation (percentage of austenite). Three graphs. Three references, all USSR.

Institution      :

Submitted      : 19 March 1955

"APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963710006-8

ZAIKIN, V.M.

Oriented crystallization. Zhur. fiz. khim. 34 no. 6 (1960) 1466  
(Nauka 1960)  
Zel'63

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R001963710006-8"

ZALKIN, V.H., kand.tekhn.nauk

Effect of molten sodium on structural materials. Metalloved.  
i term. obw. met. no. 11:54-60 N '68. (MIRA 14:12)  
(Building materials)  
(Sodium)

L 41067-66 EWT(1) IJP(C) GJ/AT  
ACC NR: AT6020410 (N)

SOURCE CODE: UR/0000/65/000/000/0129/0136

AUTHOR: Il'yenko, B. P.; Lats'ko, Ye. M.; Zalkind, V. M.; Zykov, V. G.; Tolok, V. T.

ORG: none

b1  
B7I

TITLE: Investigation of plasmoids moving in a toroidal magnetic field

SOURCE: AN UkrSSR. Issledovaniye plazmennykh sgustkov (Study of plasma clusters).  
Kiev, Naukova dumka, 1965, 129-136

TOPIC TAGS: plasmoid, plasma magnetic field, plasma injection, plasma gun, plasma  
pinch, helical magnetic field

ABSTRACT: This work reports on three experimental studies of electric fields in plasma. Electric fields arising due to polarization in plasma in 1) curved magnetic fields with varying radii of curvature, 2) in a toroidal field where two plasmoids collide and 3) in a case where a plasmoid moves along the toroidal field, are studied. The measurements were performed with two probes, one near the vessel wall and the other located at a given point in the plasma. The plasma was generated in a conical pinch gun and injected into the working region. The experiments show that polarization fields consist of the components along the toroid's major and minor radii and along the toroidal axis. Initially, the latter two components dominate in the main part of the plasmoid; subsequently, only the axial component is dominant. Plasma density was

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L 41067-66

ACC NR: AT6020410

also found to increase by an order of magnitude at the exit from the helical magnetic field of a curved toroidal section. Data for the various cases showing both space and time dependence of the various quantities measured are graphed. Orig. art. has: 9 figures.

SUB CODE: 20/ SUBM DATE: 11Nov65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 bba

L 9563-66 EWT(a)/FSS-2/EWT(1)/EWP(1)/EWA(b)  
ACC NR. AP5028507IJP(c) EC  
SOURCE CODE: UR/0286/65/000/020/0086/3086INVENTOR: Pogdanovskiy, I. M.; Zalkin, V. S.

TITLE: A device for converting the electric signal of a transducer. Class 42,  
No. 175721 [Announced by the All-Union Scientific Research Institute for the Complex  
Automation of Oil and Gas (Vsesoyuznyy nauchno-issledovatel'skiy institut kompleksnoy  
avtomatizatsii nefti i gaza)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 88

TOPIC TAGS: electronic amplifier, acoustic transducer

ABSTRACT: An Author Certificate has been issued for a device for converting the electric signal of a transducer, i.e., a chromatographic detector, to a pneumatic impulse. It contains an electronic amplifier, a transducer (see Fig. 1) and a rever-

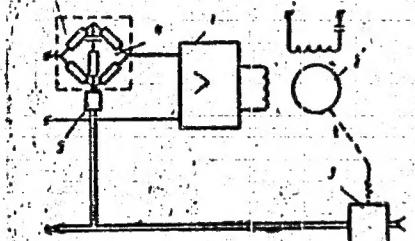


Fig. 1. Device for converting the electric signal of a transducer

1 - Electronic amplifier; 2 - reversible motor;  
3 - mechanical-to-pneumatic converter; 4 - tensiometric bridge; 5 - flexible element.

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UDC: 543.544.08  
621.317.79

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ACC NR: AP5028507

sible motor connected to a mechanical-to-pneumatic converter. To increase reliability and assure the linear relationship of output pressure to transducer signal, the electronic amplifier input contains a tensometric bridge, whose arms are connected to a flexible element which senses the output pressure to the mechanical-to-pneumatic converter. Orig. art. has: 1 figure. [NH]

SUB CODE: 09 / SUBM DATE: 09Apr64 / ATD PRESS: 4150

beck

Card 212

1. ZALIM, Ye. M.; ZAKHAROV, N. P.; LIVSHITS, Ye. M.
2. USSR (600)
4. Steam Boilers
7. Lining ceilings of boiler units with fire resistant concrete. Elek. sta., 23, No. 10, 1952
  
9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.